

WHAT IS CLAIMED IS:

1. A method of reporting a changed service option in a mobile communication system, comprising:

transmitting a message type, a channel number representing a communication path being used, encryption information, and contents of the changed service option from a base station/base station controller (BS/BSC) to a mobile switching center after a service re-negotiation procedure is performed between a mobile station and the BS/BSC.

2. The method of claim 1, wherein the message type, channel number, encryption information and contents of the changed service option are part of an assignment complete message.

3. The method of claim 1, wherein the contents of the changed service option are transmitted as a service option list, and wherein the service option list comprises a service option list Information Element Identifier (IEI) field for simultaneously supporting at least one or more services, a length field for indicating a length of transmitted information, a number of service options field for indicating a number of services changed as a result of the re-negotiation, a service option identifier (SOI) field for identifying the changed service, and a service option (i) field for indicating the changed information.

SCB
A1

0055365-001501

4. The method of claim 3, wherein if the number of the changed service options is one or more, each of the SOCI information field and the changed service option field are repeated as many as the number of the changed service options.

5. The method of claim 4, wherein a repeated form of the changed service is expressed by SOCI (#1) /SO=so_c and SOCI (2) /SO=so_d.

6. A method of reporting a changed service option in a mobile communication system, comprising:

transmitting a message type and contents of a changed service option from a base station/base station controller (BS/BSC) to a mobile switching center after a service re-negotiation procedure is performed between a mobile station and the BS/BSC.

7. The method of claim 6, wherein the transmissions form a Service Option Report Message.

8. The method of claim 6, wherein the contents of the changed service option are transmitted as a service option list, and wherein the service option list comprises a service option list information element identifier (IEI) field for simultaneously supporting at least one or more services, a length field for indicating a length of transmitted information, a number of service options field for indicating a number of services changed as a result of the re-negotiation, a service

option identifier (SOI) field for identifying the changed service, and a service option (i) field for indicating the changed information.

9. The method of claim 7, wherein if the number of the changed service options is one or more, each of the SOI information field and the changed service option field are repeated as many as the number of the changed service options.

10. The method of claim 9, wherein a repeated form of the changed service is expressed by SOI (#1) /SO=so_c and SOI (2) /SO=so_d.

11. A method of reporting a service option changed through a service option re-negotiation between a mobile station and a base station/base station controller in a mobile communication system, comprising:

reporting the changed service option to a mobile switching center using one of an assignment completion message and a service option report message, wherein each of the assignment completion message and the service option report message includes a service option list field indicating the changed options.

12. The method of claim 11, wherein if at least one service option is changed while all other services are maintained as a result of the service option re-negotiation, the contents of the service re-negotiation between the mobile station and the base station/base station controller

are reported to the mobile switching center using one of the assignment completion message and the service option report message.

13. The method of claim 11, wherein if a portion of services in progress is to be released and a service option of a non-released service is changed as a result of the service option re-negotiation, the changed service option is reported to the mobile switching center using one of the assignment completion message or the service option report message, and a service release procedure is performed with respect to the released service using a service release message and a service release completion message.

14. The method of claim 11, wherein if a portion of the services in progress is to be released and non-released services are not to be changed as a result of the service option re-negotiation, a service release procedure is performed with respect to the released service using a service release message and a service release completion message.

15. The method of claim 11, wherein if all services in progress are to be released as a result of the service option re-negotiation, a call release procedure among the mobile station, base station/base station controller, and mobile switching center is performed.

16. The method of claim 11, wherein the service option list field comprises:
a service option list Information Element Identifier (IEI), to identify services provided;
a length field, to indicate a length of transmitted information;
a number of service options field, to indicate the number of services changed as a result of negotiation;
a service option connection identifier (SOCI) field, to identify the changed service;
and
a service option field, to indicate the corresponding service information.

17. The method of claim 16, wherein if the number of the changed service options is one or more, each of the SOCI information field and the changed service option field are repeated as many as the number of the changed service options.

18. A method of reporting a change in a service option in a communication system, comprising:
performing a service re-negotiation procedure between a mobile station and a base station;
transmitting a reporting message from the base station to a mobile switching center indicating an outcome of the service re-negotiation, wherein the reporting message comprises a message type field and a service option list field.

19. The method of claim 18, wherein the reporting message is one of a service option reporting message and an assignment complete message.

20. The method of claim 19, wherein the assignment complete message further comprises a channel number field, and encryption information field, and a service option field.

21. The method of claim 19, wherein the service option list field comprises:
a service option list Information Element Identifier (IEI), to identify services provided;
a length field, to indicate a length of transmitted information;
a number of service options field, to indicate the number of services changed as a result of negotiation;
a service option connection identifier (SOCI) field, to identify the changed service;
and
a service option(i) field, to indicate the corresponding service information.

22. The method of claim 21, wherein each of the SOCI field and the service option (i) field are repeated for a number of times equal to the contents of the number of service option field.

23. The method of claim 19, wherein the service option report message contains no additional fields.

24. A Service Option Report message to report a change in services of a call in a communication network, comprising:

a service option list Information Element Identifier (IEI), to identify services provided;

a length field, to indicate a length of transmitted information;

a number of service options field, to indicate the number of services changed as a result of negotiation;

a service option connection identifier (SOCI) field, to identify the changed service;

and

a service option(i) field, to indicate the corresponding service information.

25. The message of claim 24, wherein the service option list (IEI) permits the communication system to simultaneously support at least two services.

26. The message of claim 24, wherein each of the SOCI and the service option(i) information fields are repeated in the message for a number of times equal to the number of service options.

Sub
A1

27. The message of claim 24, wherein the Service Option Report message is generated in response to a service re-negotiation.

0905166-091601